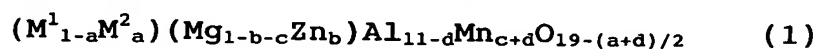CLAIMS

1. A phosphor comprising fluorescent substances I and II, wherein the fluorescent substance I contains silicate and

5   Mn as an activator and the fluorescent substance II contains a compound represented by the formula (1) or a compound represented by the formula (2) and Tb as the activator.

$$(M^1_{1-a}M^2_a)(Mg_{1-b-c}Zn_b)Al_{11-d}Mn_{c+d}O_{19-(a+d)/2} \quad (1)$$

[In the formula (1), M^1 is at least one selected from the

10   group consisting of La, Y and Gd,

M^2 is at least one selected from the group consisting of Ca, Sr and Ba,

a is not less than 0 and not more than 0.6,

b is not less than 0 and not more than 1,

15   c is not less than 0 and not more than 0.5,

d is not less than 0 and not more than 0.5,

b+c is not more than 1, and

c+d is more than 0 and not more than 0.5.]

$$(M^3_2O_3 \cdot mAl_2O_3 \cdot nB_2O_3 \quad\quad\quad (2)$$

20   [In the formula (2), M^3 is at least one selected from the group consisting of La, Y and Gd,

m is not less than 2.5 and not more than 4.5 and

n is not less than 3.5 and not more than 5.5.]

2. The phosphor according to claim 1, wherein a ratio of the

25   fluorescent substance I by weight and the fluorescent

substance II by weight is 5/95 - 95/5.

3. The phosphor according to claim 1 or 2, wherein the fluorescent substance I is represented by the formula (3).

$$Zn_{2-e}Mn_eSiO_4 \qquad\qquad (3)$$

5   [In the formula (3), e is more than 0, preferably not less than 0.001 and not more than 0.3, preferably not more than 0.2.]

4. The phosphor according to any of claims 1-3, wherein the fluorescent substance II is represented by the formula (4),

10   $$(M^1_{1-a}M^2_a)(Mg_{1-b-c}Zn_bMn_c)Al_{11}O_{19-(a/2)} \qquad (4)$$

[In the formula (4), M^1 is at least one selected from the group consisting of La, Y and Gd,

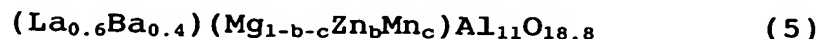M^2 is at least one selected from the group consisting of Ca, Sr and Ba,

15   a is not less than 0 and not more than 0.6,

b is not less than 0 and not more than 1,

c is not less than 0 and not more than 0.5 and

b+c is not more than 1.]

5. The phosphor according to claim 4, the fluorescent substance

20   II is represented by the formula (5).

$$(La_{0.6}Ba_{0.4})(Mg_{1-b-c}Zn_bMn_c)Al_{11}O_{18.8} \qquad (5)$$

[In the formula (5), b is not less than 0 and not more than 1,

c is not less than 0 and not more than 0.5, and

25   b+c is not more than 1.]

6. The phosphor according to any of claims 1-3, wherein the the fluorescent substance II is represented by the formula (6),

$$(M^3{}_{1-f}Tb_f)Al_3(BO_3)_4 \qquad\qquad (6)$$

[In the formula (6), M^3 is at least one selected from the group consisting of La, Y and Gd, and

f is more than 0 and not more than 0.6.]

7. The phosphor according to claim 6, wherein the fluorescent substance II is represented by the formula (7).

$$(Y_{1-f-g}Gd_gTb_f)Al_3(BO_3)_4 \qquad\qquad (7)$$

[In the formula (7), f is more than 0 and not more than 0.6 and g is not less than 0 and not more than 1.]

8. A phosphor paste comprising the phosphor according to any of claims 1-7, a solvent and a binder.

9. A vacuum ultraviolet excited light-emitting device comprising the phosphor according to any of claims 1-7 and an electrode.

10. Use of the phosphor according to any of claims 1-7 as a vacuum ultraviolet excited light-emitting device.